

REMARKS

In the above-referenced Final Office Action, the Examiner rejects claims 1-19 under 35 USC 112, first paragraph, as failing to comply with the written description requirement. Specifically, the Examiner objected to the added limitation that the tubes are "substantially unobstructed along a length thereof". It is noted that the drawings clearly show the tubes as being unobstructed along their length, however, this limitation is being removed from proposed amended claim 1 in response to the Examiner's rejection. The Examiner also states that the limitation of "inserting said predetermined configuration into an opening of a header of such heat exchanger" is not described in the specification. The Examiner's attention is directed to the specification at page 5, lines 11+, which discuss securing the ends of the tubes 12 into openings 22 in the header.

Now turning to the more substantive issues the Examiner finally rejected Claims 1-15 under 35 U.S.C. 102(b) as being anticipated by Hagenmeister(U.S. Patent 4,815,535). It is the Examiner's position that Hagenmeister teaches each and every limitation of the claims.

The Applicant respectfully disagrees with the Examiner's position. No where does Hagenmeister teach or imply that the plurality of tubes may be arranged such that the row pitch and

tube pitch are spaced substantially identical, as required in amended claim 1, nor does Hagenmeister teach that the row pitch and the tube pitch are spaced at about 45-degree increments, as required by original claim 7. See Figure 2 of Hagenmeister. Applicant's design allows for an acceptable amount of web material between the predetermined number of openings, which was not present in the prior art (see Prior Art Figure 1 of the present application) nor in Hagenmeister. Applicant's design also increases the air flow around the tubes 12, enables additional tubes to be placed in the same amount of envelope space as those exchangers of the prior art, and allows for a smaller, more compact heat exchanger design. While it is acknowledged that Hagenmeister shows the plurality of tubes in a staggered array, Hagenmeister fails to teach applicant's particularly claimed arrangement wherein the row pitch and tube pitch are spaced substantially identical resulting in the vastly improved heat exchanger design discussed above. For the reasons set forth above, it is respectfully requested that the rejection of claims 1-19 (amended claims 1 and 6-19) under 35 USC 102(b) over Hagenmeister be withdrawn as Hagenmeister fails to teach each and every limitation of amended claim 1 and especially fails to teach each and every limitation set forth in original claim 7.

Additionally, the Examiner finally rejected Claims 16-19 under 35 U.S.C. 103(a) as being unpatentable over Hagenmeister (U.S. Patent 4,815,535). For the reasons set forth above, it is respectfully requested that this rejection be withdrawn as the teachings of Hagenmeister fail to render these claims obvious.

It is respectfully requested that the above amendment be entered as it does not introduce new matter, it does not raise new issues that require further search and/or consideration by the Examiner, and it materially reduces issues for appeal.

In the event the Examiner has further difficulties with the allowance of the application, he/she is invited to contact the undersigned Agent for Applicant by telephone at (412)380-0725 to resolve any remaining questions or issues by interview and/or by Examiner's amendment as to any matter that will expedite the completion of the prosecution of the application.

Respectfully submitted,

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